Realizing the MaaS promise?

Current limitations & forward looking requirements
MaaS will eventually benefit to all stakeholders

- Improved **customer experience** by providing **freedom to move** using multiple **mobility options** based on **preferences** (trip duration, modes, cost, environmental)
- … triggering a **move from ownership towards usage** of mobilities “as a service”
- **Reduction of overall mobility budget** (cost of usage vs. total cost of ownership)

- Ability to orient behavior towards **more sustainable** mobility solutions: mass transit, walking, cycling, new mobility solutions
- **Serves public good** by increasing **accessibility** and **inclusiveness** of mobility (through first-and last-mile solutions), improved **quality and reliability** and **tariffs integration**
- **System-level optimization** of investments and assets utilization

- **Real-time optimization** of the each of the mobility offerings
- **Expanded access to all mobility needs** expressed, thereby increasing the addressable market and **reducing acquisition and customer support costs**
- Provision of an **additional channel for communicating and engaging** with users

Source: Arthur D. Little, Future of Mobility lab
Latest evolutions – MaaS enablers

More openness from authorities towards new mobility solutions providers (cf. Covid 19), increasingly considered as “part of the solution”

MaaS is top of mind of policymakers – Interest and willingness to frame (e.g. data sharing policy, MSP regulation) and enable MaaS (public data-lake, back-end,..)

Enlargement of MaaS technical suppliers’ base. Emergence of new actors and partnerships for comprehensive MaaS and specific building blocks

Accelerated digitalization of mass transit ticketing and payment … while several (card-centric) ticketing systems still require upgrading
Realizing the MaaS promise?

Latest evolutions – MaaS market, business models and offerings

- Acceleration of MaaS deployment in Europe and worldwide
  
  While many initiatives are still at pilot stages or with limited modes coverage and functionalities

- Notable increase of public-led MaaS initiatives (G2C):
  
  Increased # of G2C platforms, incl. open to 3rd party B2C MaaS operators

  ... but still several walled gardens!

- Private led B2C MaaS platforms expansion
  
  ... even if time-to-market is (much) slower than expected

  e.g. Whim (five cities), Ubigo (soon 2 cities)

- Regional MaaS offerings are emerging
  
  e.g. Yumuv in Switzerland, MaaS in Skåne region, Renfe RailMaaS...

  ... and revived interest for rural MaaS

- B2B offerings have recently appeared

  Often linked with fiscal incentives ("mobility budget")

Source: Arthur D. Little, Future of Mobility lab
Realizing the MaaS promise?

... but current MaaS endeavors have limitations

- **Time to market:** deployment of MaaS platforms not going as fast as expected
- **User adoption:** MaaS offerings have found little traction and modal shift promise not yet delivered
- **PTOs resistance:** lack of clear partnership models with MaaS operators is as major obstacle
- Consumer-facing B2C MaaS platforms haven’t yet reached scale and economic viability
- Expected **benefits for MSPs** (reduced acquisition & service costs) not materializing

Is there a real business case for MaaS or are we all going after a ghost?

Source: Arthur D. Little, Future of Mobility lab
Realizing the MaaS promise?

Financial outlook? **Limited scale & profitability yet… but it’s a journey!**

**B2C**
- **Commission-based model** (% on each booking) **requires** scale. E.g. 5% commission on 20k weekly eScooter trips at avg €5 would yield only €260k/year
- **A subscription-based model** (“fee for all mobilities”) **has high potential** (tapping into private cars’ budget)… but requires to **built trust to shift mindset**

**G2C**
- Similar logic applies, but other **public benefits could be considered** such as societal, social and environment impacts and (ultimately) public assets optimization
- Opportunity for PTO to **increase the attractiveness** of the core PT offering
- If it is based on **open model**, G2C MaaS can help **accelerate MaaS B2C**

**B2B(2C) or G2B(2C)**
- Interesting model to accelerate **users adoption**, esp. if linked to fiscal incentives
- … but also to **drive additional revenues** through sales of **additional business services** (mobility account, travel expenses), generating revenue from day one!

**To which extent should MaaS be subsidized if it drives public benefits?**

Source: Arthur D. Little, Future of Mobility lab
Realizing the MaaS promise?

MaaS x Covid19 – Which opportunities for MaaS in the “new normal”?

Fast Adaptation

In the short term, the pandemic had a negative impact on MaaS development, as its business model largely revolves around trips performed with shared mobility, that are suffering from collapsing demand and trust.

Fast Recovery

MaaS could contribute to increased system resilience (choice & ease of use of multiple mobility options) and rebuilding trust by providing real-time multimodal information considering preferences and circumstances... provided there would be sufficient adoption!

Fast Forward Looking (new normal)

If properly framed, MaaS has the potential to positively contribute to deliver the promise of sustainable, resilient and human-centric mobility systems...

Source: Arthur D. Little & UITP, “Future of Mobility Post-Covid19”, July 2020
Prerequisites for accelerated MaaS deployment & adoption

Data sharing regulations & open ticketing/payment for all modes
Data sharing and opening of PT ticketing and payment are requirements for MaaS
… but to maximize MaaS mode coverage, regulation should apply to all MSPs/mobility modes

Multiplicity of market models will drive UX! (G2C + B2C/B)
Increased PTA involvement in MaaS is good to drive virtuous MaaS development!
… but public/private collaboration is key for MaaS success and closed models should be avoided: PT data and APIs should be open to 3rd party B2C / B2B MaaS platforms, under fair conditions & with regulated bi-directional data exchange

MaaS is not an app.. Investments in physical services & infra are critical
Seamless mobility is a requirement to drive MaaS as an alternative to individual car ownership
Accelerated investment in mobility services and multimodal infrastructures are critical!

Source: Arthur D. Little, Future of Mobility lab
### Realizing the MaaS promise?

#### Forward looking requirements to realize the MaaS promise

<table>
<thead>
<tr>
<th>City transportation policies &amp; MDM</th>
<th>Exhaustivity of Modes/Infra coverage</th>
<th>MaaS + TaaS</th>
<th>Holistic data mngt is the new oil!</th>
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</thead>
<tbody>
<tr>
<td><strong>Regulations</strong> (space, modes), investments in superior services and infra., marketing</td>
<td>Optimization of mobility flows &amp; assets requires to cover all modes &amp; infra, including the private cars!</td>
<td>Integration of MaaS with the movement of goods (Transport-as-a-Services)</td>
<td>Holistic and open mobility data-lake. … linked with traffic mngt system of Smart Cities</td>
</tr>
<tr>
<td>Management &amp; Enforcement vs. MSP</td>
<td>Geographical extension</td>
<td>PTA capabilities</td>
<td>Unified Governance</td>
</tr>
<tr>
<td>Dynamic management of MSP &amp; regulatory enforcement, incl. trip-based subsidies?</td>
<td>Development of regional MaaS (incl. inter-city modes) and of platforms interoperability</td>
<td>Further development of capabilities is required for cities to step up and govern mobility holistically</td>
<td>Integration of public and private stakeholders (incl. civil society repres.) into a unified governance</td>
</tr>
</tbody>
</table>

**Collaboration & mastering the ecosystem play to create shared value!**

Source: Arthur D. Little, Future of Mobility lab
Realizing the MaaS promise? – Beyond MaaS

Beyond MaaS – Towards a Unified Mobility Management Model?

Unified mobility governance

Users (B2C & B2B2C)

Front-end(s) MaaS B2C  Front-end(s) MaaS B2B  Front-end(s) TaaS  Regulatory B2G

Real-time provision of services, optimization & enforcement

Public MaaS Back-end  Master mobility data lake  Urban mobility management (flow & assets optimization)

Public TaaS Back-end  Regulation enforcement (incl. trip subsidies)

bi-directional data exchanges

Standards & protocols for data exchanges

Source: Arthur D. Little, Future of Mobility lab
MaaS has not yet delivered on its promises… but it’s a journey and there are huge benefits ahead justifying continuous efforts

… some MaaS enablers materialized over past years, but further effort & openness is required (esp. by Cities and PTOs) to enable MaaS

… MaaS is not just an app! Sound city mobility policy is required to build trust and drive adoption! (i.e. physical services & infras)

… realizing the MaaS promise will require a more comprehensive take as well as increased collaboration amongst stakeholders

A Unified Mobility Management Model would help to fully extract value at system level… Can we make it happen?
“Who says it can’t be done?”

François-Joseph Van Audenhove
Partner
Head of Future of Mobility Lab

+32 473 99 83 58
vanaudenhove.f@adlittle.com